



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N. W. SUITE 818
ATLANTA, GEORGIA 30303

FEB 18 1976

J. H. Sniezek, Chief, Light Water Reactor Programs Branch, Office of
Inspection and Enforcement, Headquarters
THRU: N. C. Moseley, Director, Region II, Office of Inspection and
Enforcement

FLORIDA POWER CORPORATION, CRYSTAL RIVER 3, DOCKET NO. 50-302 - RETESTING
FOLLOWING MODIFICATIONS OF REACTOR BUILDING SPRAY SYSTEM

BSW informed the Director of IE by letter of May 8, 1975, of a possible
deficiency in the performance of the sodium thiosulfate reactor building
spray system. The concern was that the sodium thiosulfate and sodium
hydroxide tanks would empty at a rate faster than designed, i.e., would
not inject their contents at a rate commensurate with the draining rate
of the borated water storage tank (FSAR 6.2.2.1).

In September 1975, a draw down test was performed of the system by
filling the BWST, the sodium hydroxide and sodium thiosulfate tanks with
water, then using the safeguards pumps to transfer the water from all
three of the tanks simultaneously to the refueling canal. Analysis of
the results reveals that when the draw down test was terminated after 37
minutes of pumping, the BWST was 91% empty, the sodium hydroxide tank
was still 66.3% full and the sodium thiosulfate tank was 71.3% full.
FPC's consultant, Gilbert Associates, developed a computer program
(Model) to analyze the flow characteristics of the chemical tanks and
associated piping in relation to the flow characteristics of the borated
water storage tank. The analysis performed by the consultant, using the
model, agreed closely with the test results. Based on the analysis, the
consultant recommended that a stop check valve in each of four discharge
lines from the chemical tanks (2 lines per tank) be replaced with swing
check valves to reduce the pressure drop across the valves; thereby
increasing the flow. The licensee has informed Region II that the
valves will be cut out and replaced. Also, that the model indicates
that the system will perform as designed after the modification; therefore,
retesting will not be performed.

Our position is that the specific discrepancy relating to the safeguards
systems chemical tanks and piping arrangement was identified and con-
firmed by testing and retesting should be performed to verify the

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J. H. Sniezek

-2-

adequacy of the modification. This position has been pursued with licensee corporate management personnel without results. We would not be in a position to recommend issuance of the license without retest of this system. You are requested to review the condition and if you concur in our position, discuss the matter with Licensing.



F. J. Long, Chief
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Support Branch

cc: G. Roy, IE:HQ
S. Bryan, IE:HQ
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